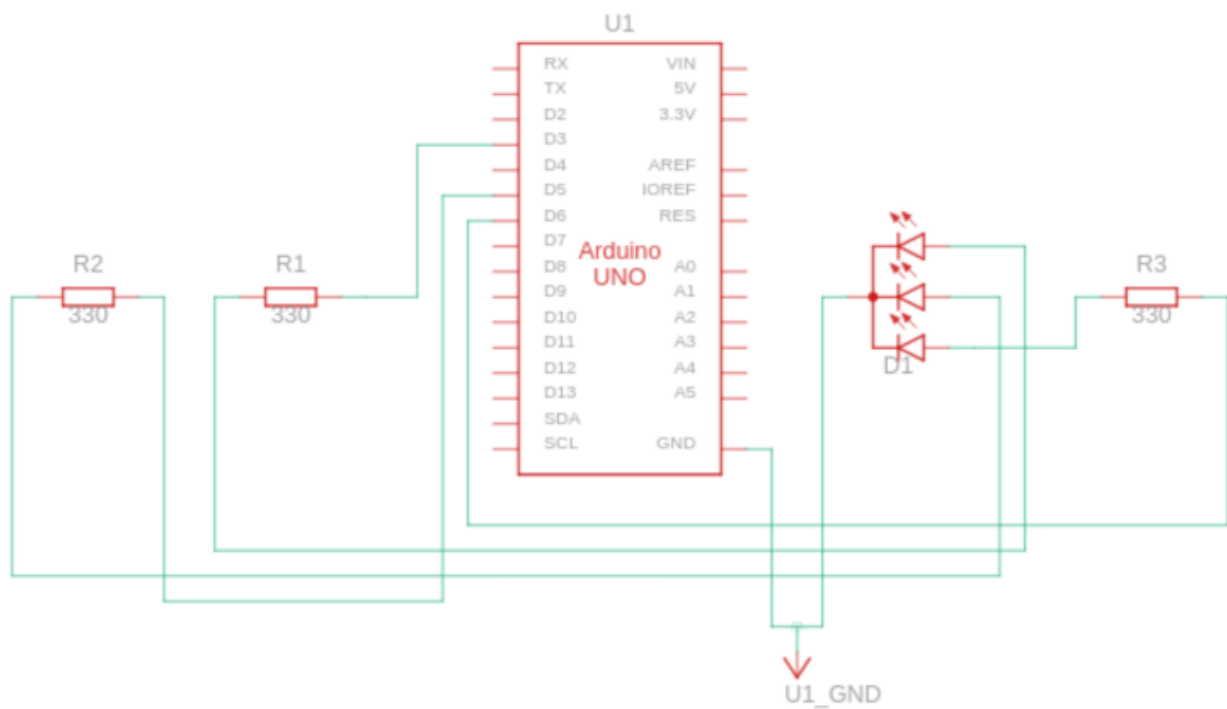


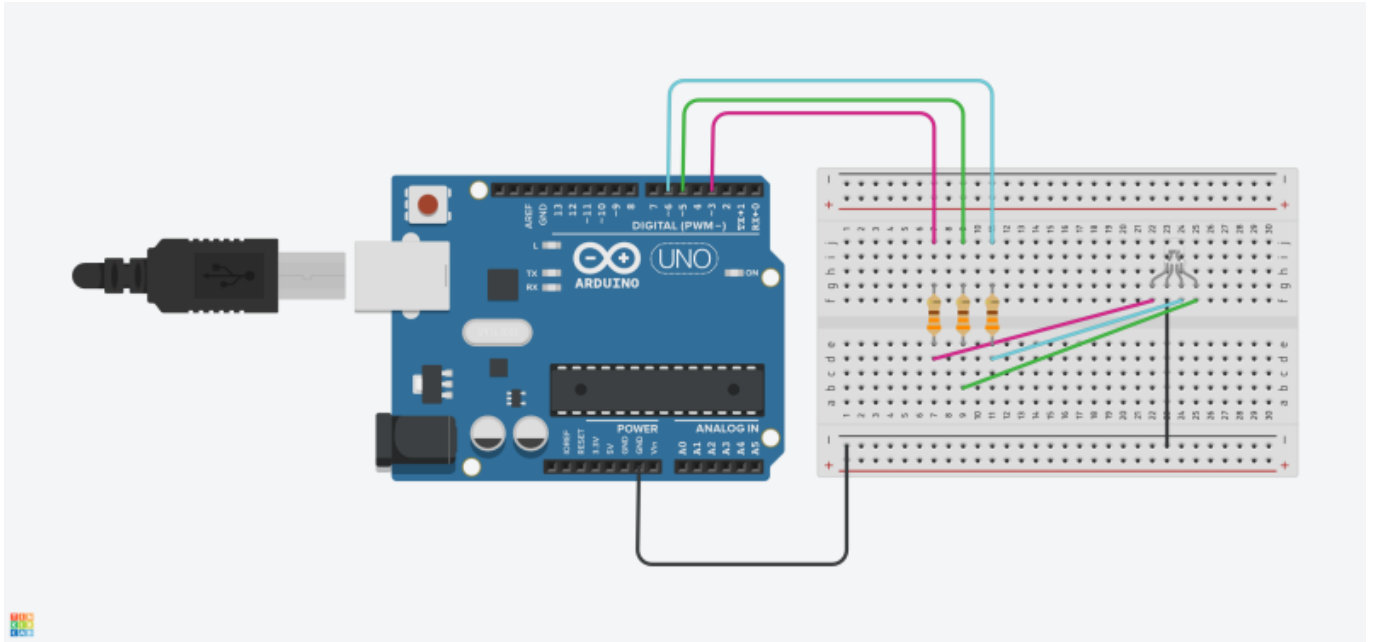
Exercices Arduino avec la maquette

Arduino RVB Tinkercad

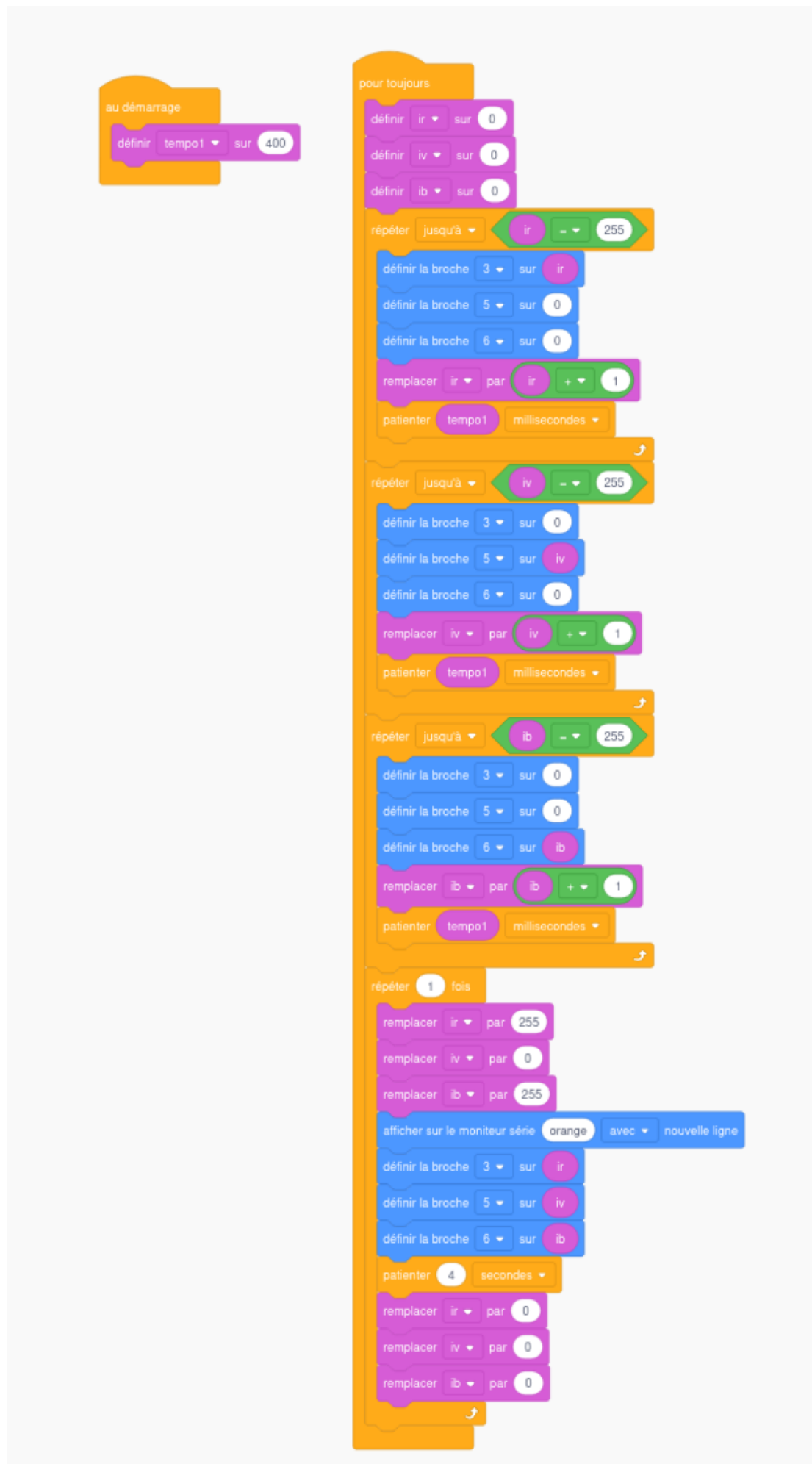
[Code couleurs RVB](#)

Plans





Code en mode Block



Code

[maquette_arduino001.ino](#)

```
// C++ code
// Faire varié les couleurs de la LED RVB
//
int ir = 0; // rouge
int iv = 0; // vert
int ib = 0; // bleu
int tempol = 0;
int counter;

void setup()
{
  pinMode(3, OUTPUT);
  pinMode(5, OUTPUT);
  pinMode(6, OUTPUT);
  Serial.begin(9600);

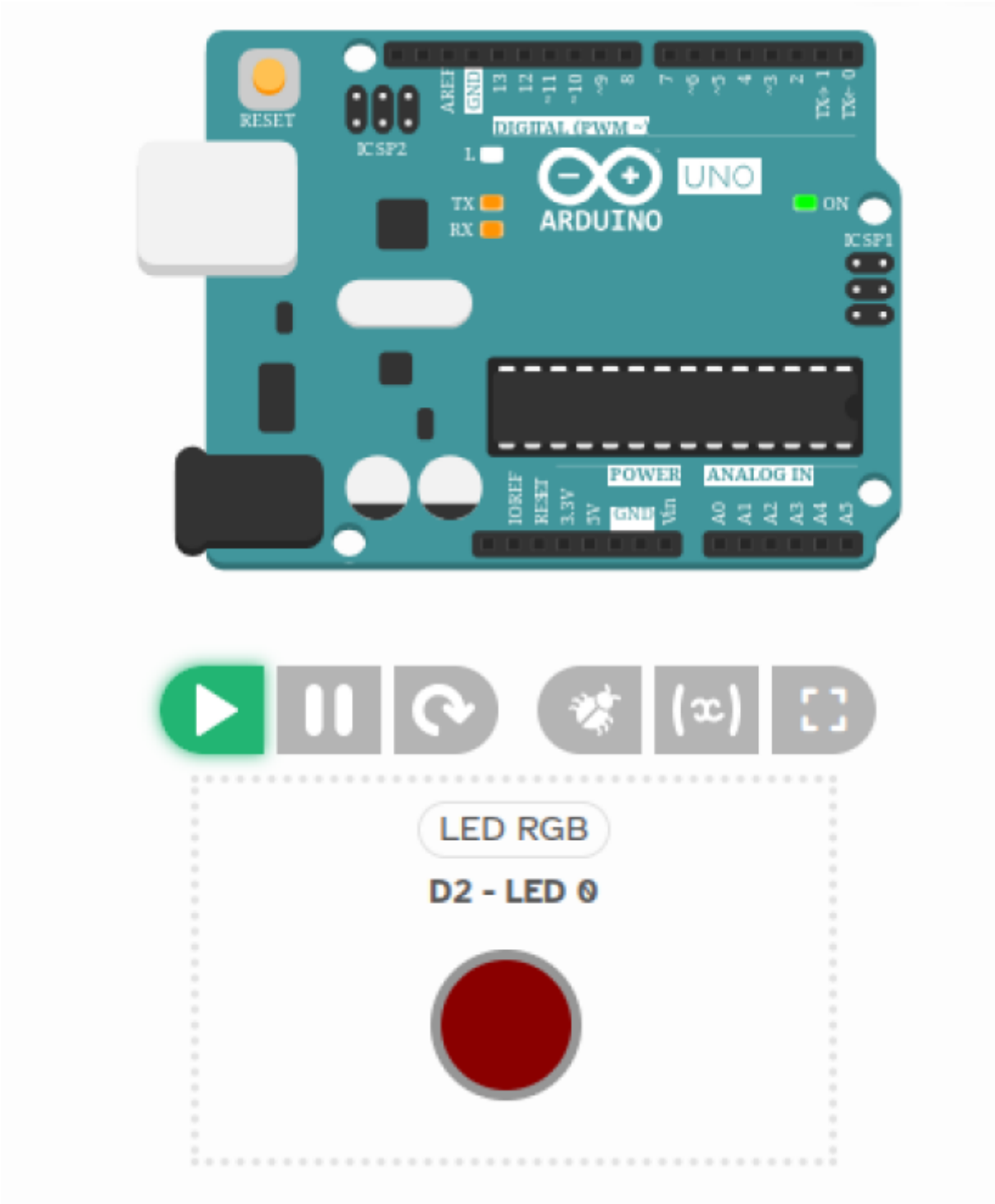
  tempol = 400;
}

void loop()
{
  ir = 0;
  iv = 0;
  ib = 0;
  while (!(ir == 255)) {
    analogWrite(3, ir);
    analogWrite(5, 0);
    analogWrite(6, 0);
    ir += (ir + 1);
    delay(tempol); // Wait for tempol millisecond(s)
  }
  while (!(iv == 255)) {
    analogWrite(3, 0);
    analogWrite(5, iv);
    analogWrite(6, 0);
    iv += (iv + 1);
    delay(tempol); // Wait for tempol millisecond(s)
  }
  while (!(ib == 255)) {
    analogWrite(3, 0);
    analogWrite(5, 0);
    analogWrite(6, ib);
    ib += (ib + 1);
    delay(tempol); // Wait for tempol millisecond(s)
  }
  for (counter = 0; counter < 1; ++counter) {
```

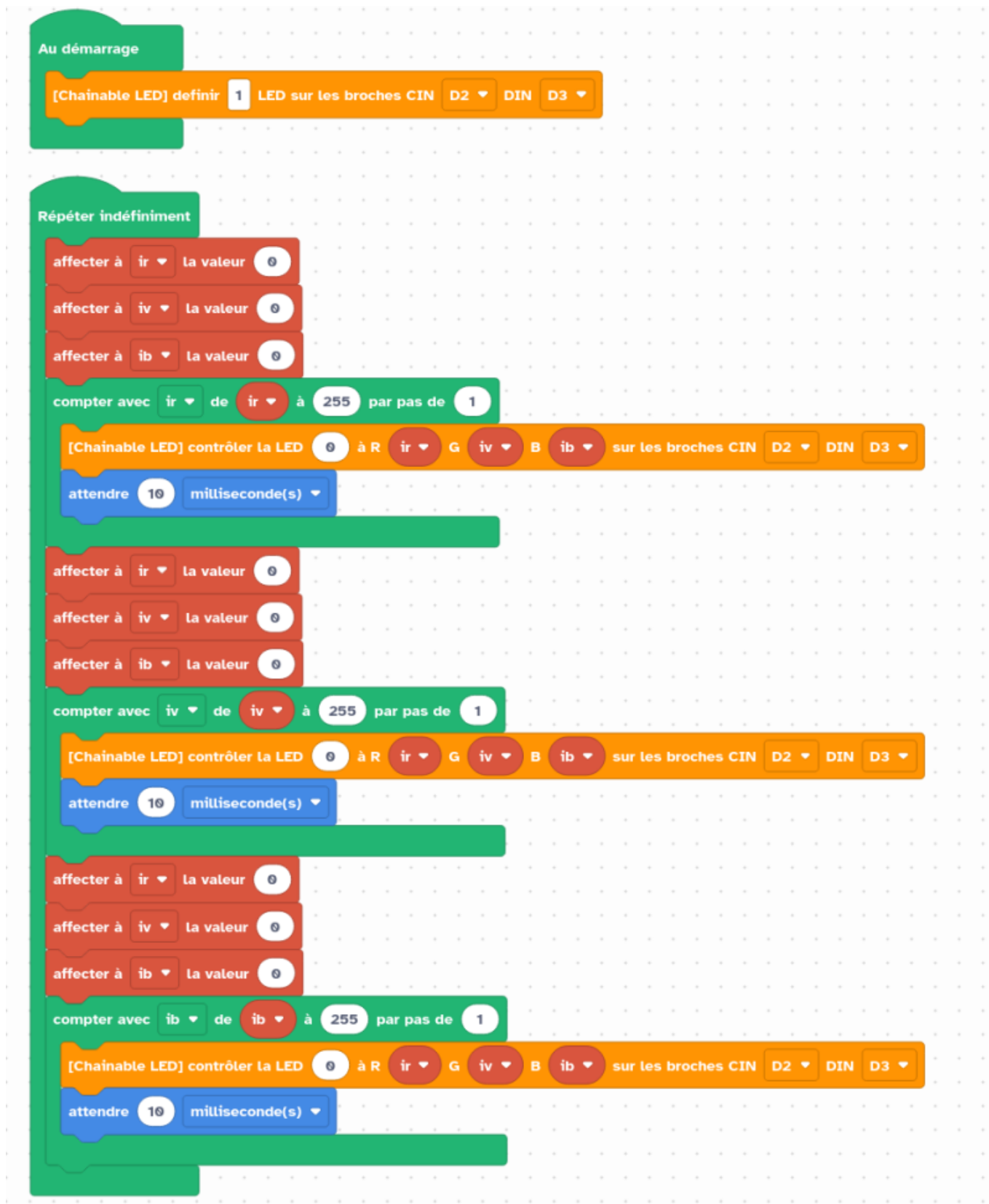
```
Serial.println("Rose");  
ir += 255;  
iv += 0;  
ib += 255;  
analogWrite(3, ir);  
analogWrite(5, iv);  
analogWrite(6, ib);  
delay(4000); // Wait for 4000 millisecond(s)  
ir += 0;  
iv += 0;  
ib += 0;  
}  
}
```

Arduino RVB-Grove Vittascience

Plan



Code Mode Block



Code C++

[arduinoRVB_VTS_001.ino](#)

```
#include <ChainableLED.h>

#define PIN_CHAINABLE_LED_DIN_3 3
```

```
#define PIN_CHAINABLE_LED_CIN_2 2
#define CHAINABLE_LED_COUNT_2 1

ChainableLED RGBLed_2(PIN_CHAINABLE_LED_CIN_2, PIN_CHAINABLE_LED_DIN_3,
CHAINABLE_LED_COUNT_2);

int ir;
int iv;
int ib;

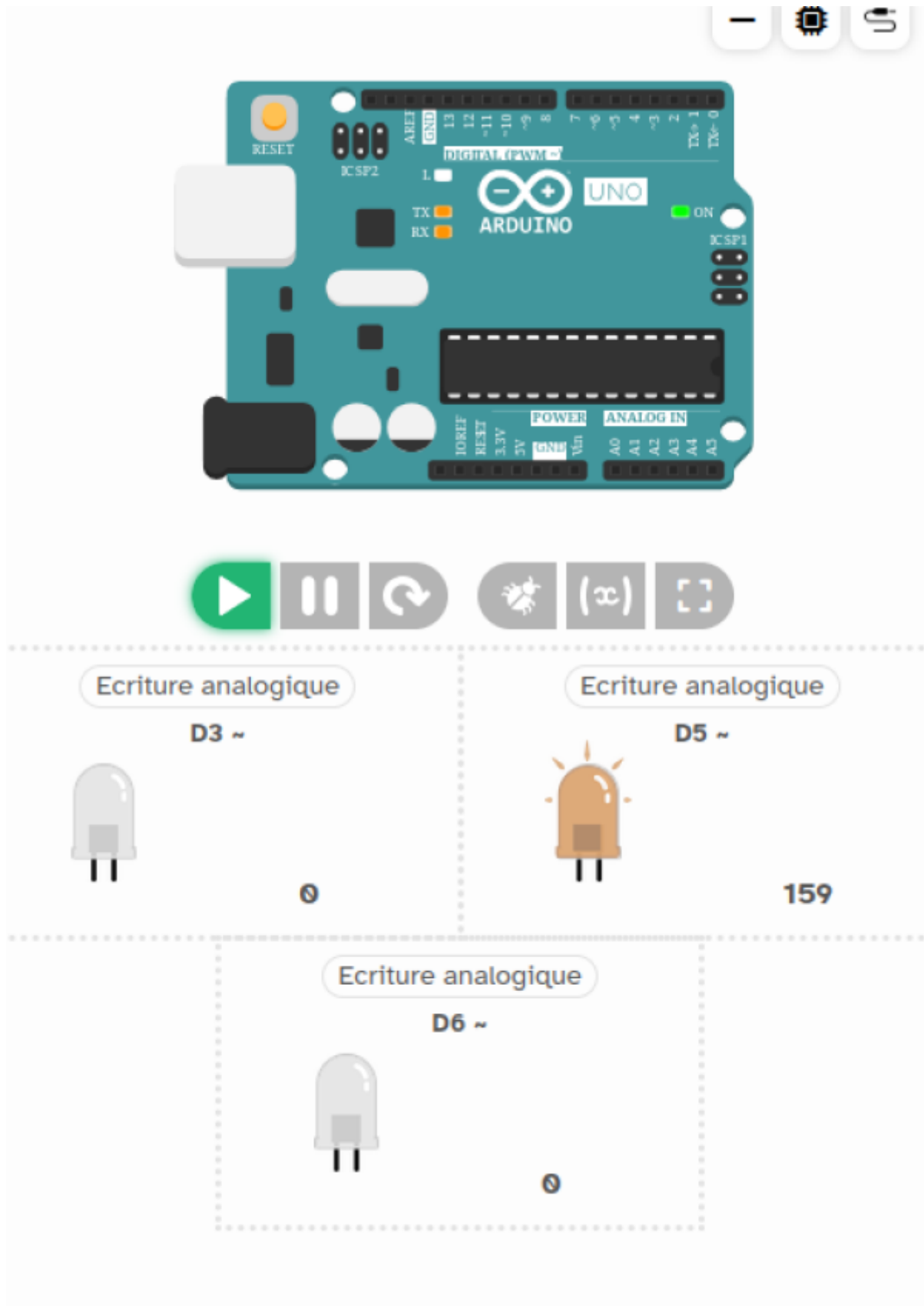
void setup() {
  pinMode(PIN_CHAINABLE_LED_DIN_3, OUTPUT);
  pinMode(PIN_CHAINABLE_LED_CIN_2, OUTPUT);
  RGBLed_2.init();
}

void loop() {
  ir = 0;
  iv = 0;
  ib = 0;
  int ir_inc = 1;
  if (ir > 255) {
    ir_inc = -ir_inc;
  }
  for (ir = ir;
        ir_inc >= 0 ? ir <= 255 : ir >= 255;
        ir += ir_inc) {
    RGBLed_2.setColorRGB(0, ir, iv, ib);
    delay(10);
  }
  ir = 0;
  iv = 0;
  ib = 0;
  int iv_inc = 1;
  if (iv > 255) {
    iv_inc = -iv_inc;
  }
  for (iv = iv;
        iv_inc >= 0 ? iv <= 255 : iv >= 255;
        iv += iv_inc) {
    RGBLed_2.setColorRGB(0, ir, iv, ib);
    delay(10);
  }
  ir = 0;
  iv = 0;
  ib = 0;
  int ib_inc = 1;
  if (ib > 255) {
    ib_inc = -ib_inc;
  }
  for (ib = ib;
```

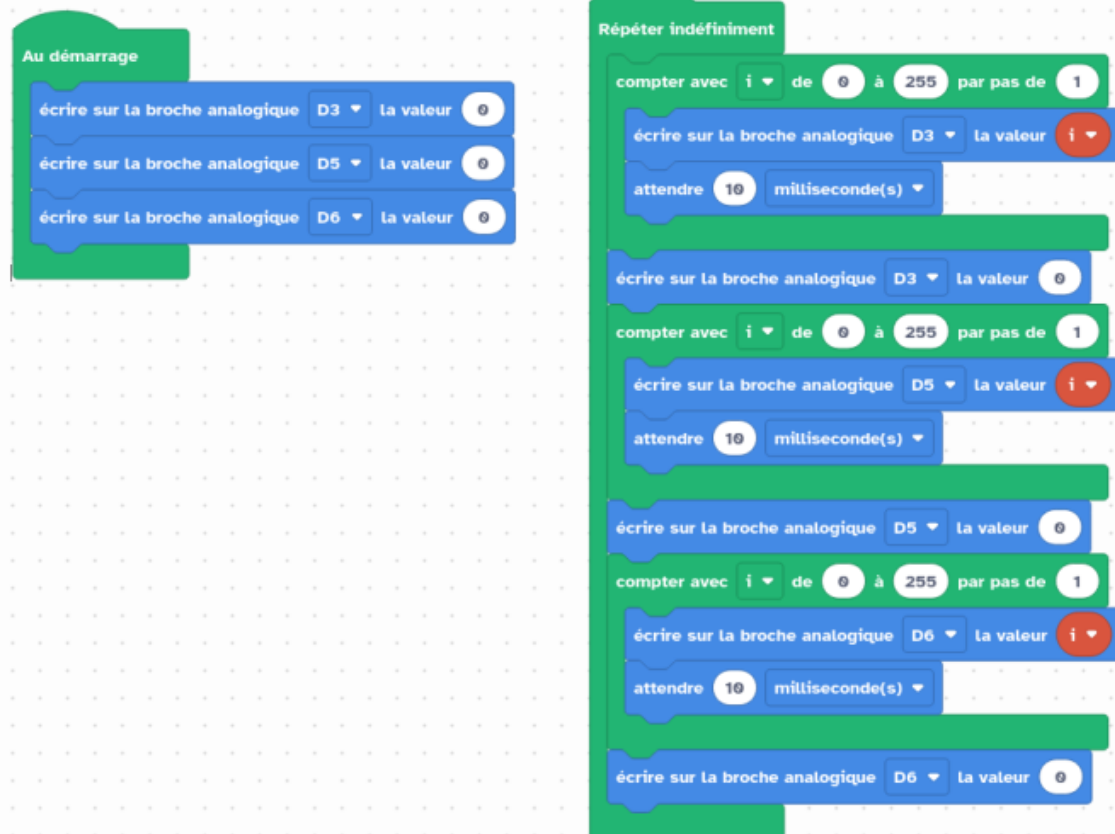
```
    ib_inc >= 0 ? ib <= 255 : ib >= 255;  
    ib += ib_inc) {  
    RGBLed_2.setColorRGB(0, ir, iv, ib);  
    delay(10);  
  }  
}
```

Arduino RVB Cathode commune

Plan



Code block



Code C++

arduinoRVBCatC.ino

```
int i;

void setup() {
  pinMode(3, OUTPUT);
  pinMode(5, OUTPUT);
  pinMode(6, OUTPUT);
  analogWrite(3, 0);
  analogWrite(5, 0);
  analogWrite(6, 0);
}

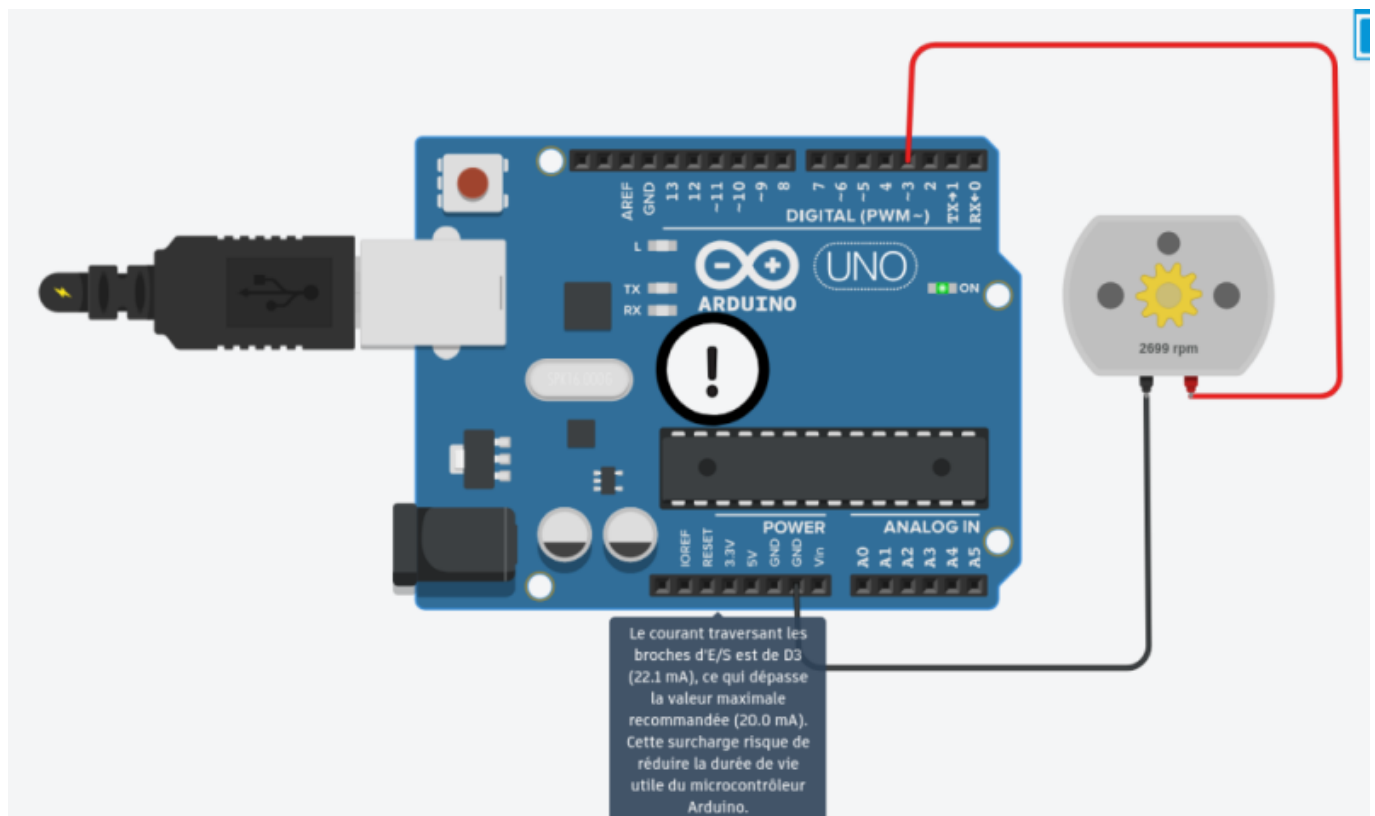
void loop() {
  for (i = 0; i <= 255; i++) {
    analogWrite(3, i);
    delay(10);
  }
  analogWrite(3, 0);
  for (i = 0; i <= 255; i++) {
    analogWrite(5, i);
  }
  analogWrite(5, 0);
  for (i = 0; i <= 255; i++) {
    analogWrite(6, i);
  }
  analogWrite(6, 0);
}
```

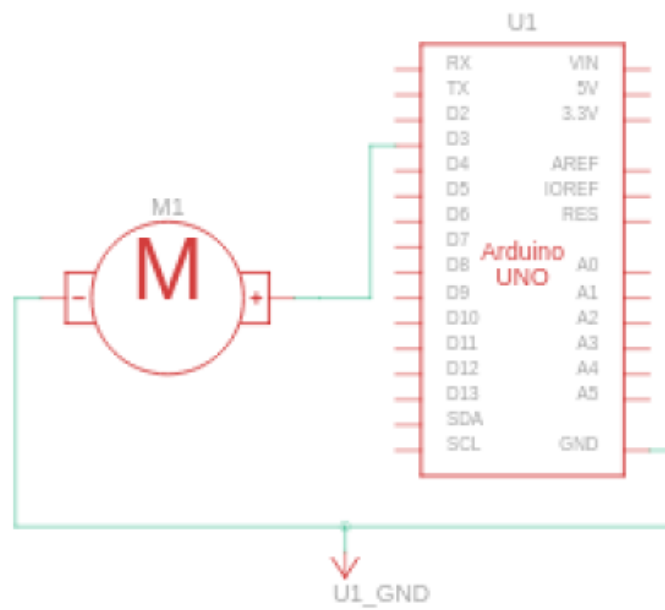
```
    delay(10);  
}  
analogWrite(5, 0);  
for (i = 0; i <= 255; i++) {  
    analogWrite(6, i);  
    delay(10);  
}  
analogWrite(6, 0);  
}
```

Arduino Moteur CC 1 sens

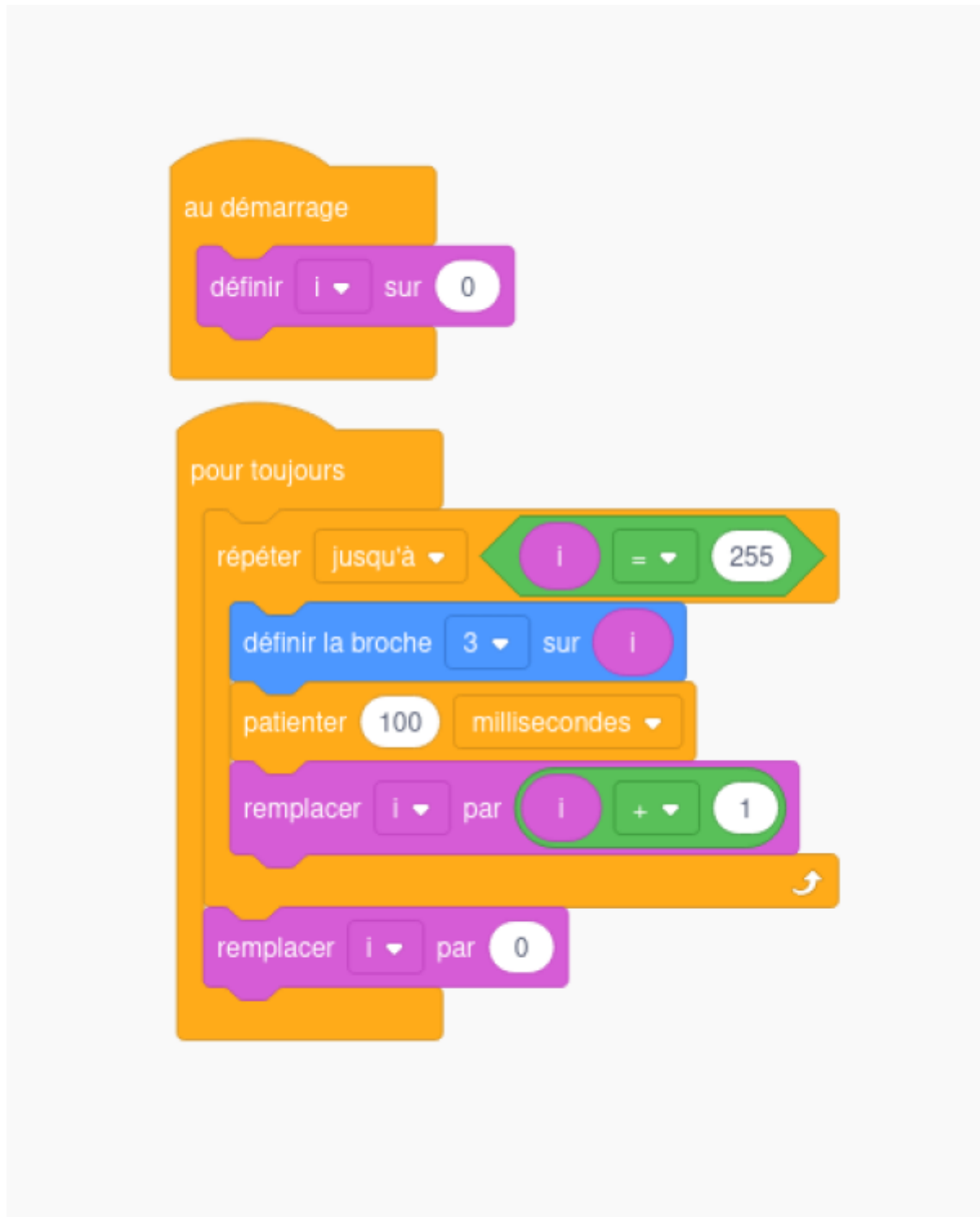
Plans

Moteur en direct sur sortie Arduino





Code Block

**code C++**[Arduinomoteurdirect.ino](#)

```
// C++ code
//
int i = 0;

void setup()
{
  pinMode(3, OUTPUT);
}
```

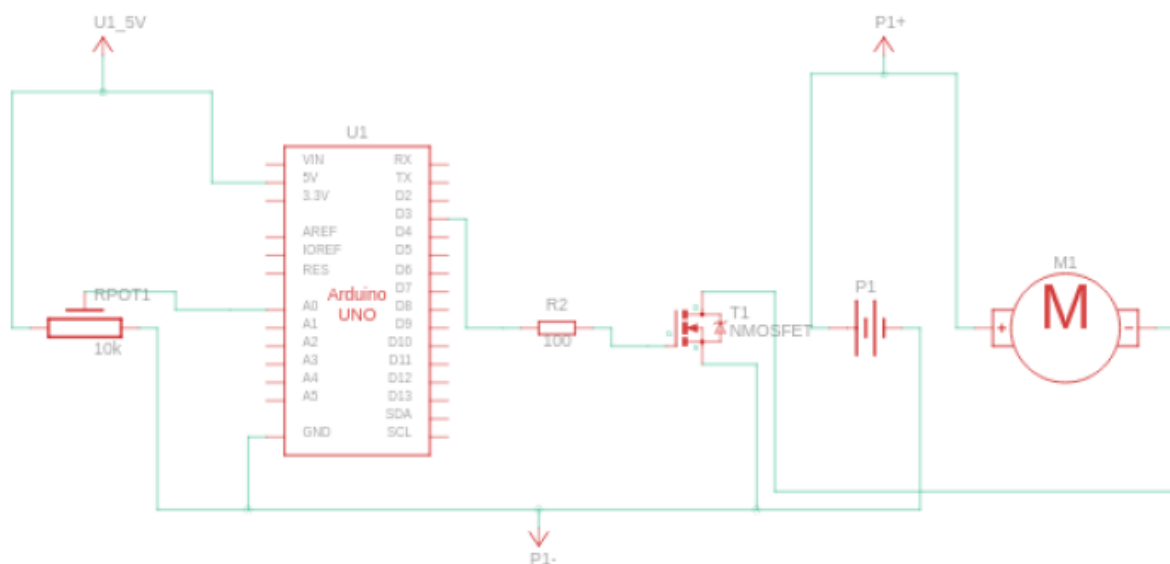
```

    i = 0;
}

void loop()
{
    while (!(i == 255)) {
        analogWrite(3, i);
        delay(100); // Wait for 100 millisecond(s)
        i += (i + 1);
    }
    i += 0;
}

```

Avec commande moteur via Mosfet



Code C++

ArduinoMoteurViaMosfet.ino

```

/*
Faire varier la vitesse du moteur en fonction de la position et donc de
la valeur du potentiometre
*/

int motorPin = 3; // Controle de vitesse PWM vers la gate du
Mofset
int potarPin=0; // on branche un potentiomètre sur la PIn A0
int sensorValue=0; // la valeur entre 0 et 1023 déduite de la

```

position du potentiomètre

`int` `outputValue=0;` *// la valeur entre 0 et 255 que l'on va utiliser pour régler la vitesse du moteur*

// Exécutee une seule fois

`void` `setup()` {

// initialiser la communication serie

`Serial.begin(19200);`

`pinMode(motorPin, OUTPUT);` *// motorPin est utilisée en sortie*

}

// exécutée en boucle

`void` `loop()` {

// lire la valeur en entrée de la Pin A0

`sensorValue = analogRead(potarPin);`

// afficher sur le moniteur série la valeur lue, pas obligatoire mais toujours intéressant

`Serial.println(sensorValue);`

// conversion de la valeur sensorvalue (qui va de 0 à 1023) en une valeur entre 0 et 255, outputvalue

`outputValue = map(sensorValue, 0, 1023, 0, 255);`

// outputvalue permet de contrôler la vitesse du moteur

`analogWrite(motorPin,outputValue );` *// valeur de 0 à 255*

`delay(100);`

}

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